

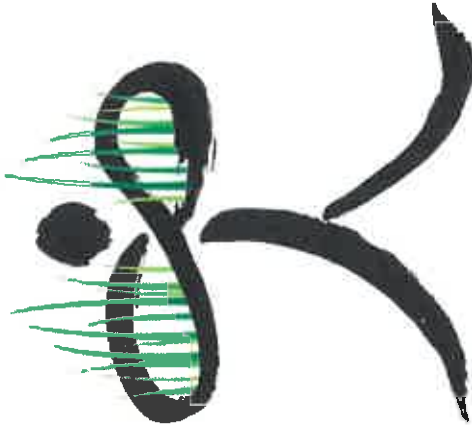
Ramsar Sites of the World

Exemplary sites demonstrating delivery of the Ramsar goals across the world

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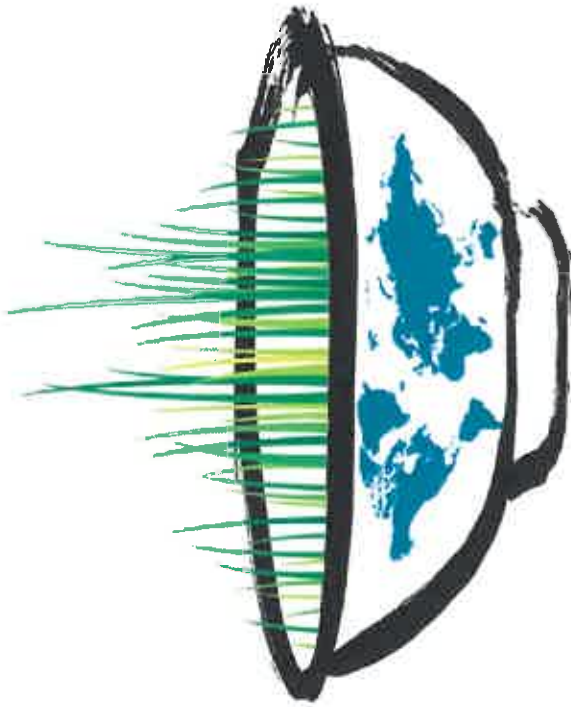
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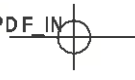




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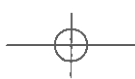
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New Zealand

Awarua Wetland (previously Waituna Lagoon)

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Vital Statistics

Jurisdiction: Department of Conservation
Website: <http://www.doc.govt.nz/conservation/land-and-freshwater/wetland>
Size: 19,500 ha
Status: Waituna Lagoon was designated as a wetland of international importance in 1976. The Ramsar site was extended in 2008 to include three major estuaries and over 10,000 hectares of the Awarua peat complex. Renamed the Awarua Wetland.
Location: 20 km south east of Invercargill, South Island, New Zealand
Justification of designation: Awarua Wetland meets eight criteria for designation under the Ramsar Convention (Criteria 1-8). The wetland is representative of peatlands and estuaries of Southern New Zealand and contains several nationally threatened and uncommon species of flora and fauna. It also maintains biological diversity in the region. More than 80 birds have been recorded including migratory species such as the Bar-tailed Godwit (*Limosa lapponica*). The wetlands support marine, estuarine and freshwater fish including species that are migratory for part of their life cycle.

Site History and Ecological Character

The Awarua Wetland has long been recognised as an important area for its biological diversity and cultural values. The local Maori people Ngai Tahu traditionally utilised the wetlands as a food source (e.g. fishing native eels) and for other resources. With European arrival many wetlands in New Zealand were cleared and drained for agriculture. Consequently, the Awarua Wetland is one of the largest remaining wetland complexes.

Being the first designated Ramsar wetland in New Zealand this site led the way for listing other sites, and substantially increased the awareness of New Zealanders about the conservation and wise use of wetlands. Listing of Awarua Wetland also supported the expansion of conservation reserves through government land acquisition. These reserves protect vulnerable wetland ecosystems adjacent to the Ramsar site.



The site includes four major wetland types: Coastal lagoons (notably Waituna Lagoon), freshwater swamps, extensive peatlands, and estuaries. Each ecosystem is unique and maintained by different ecological processes.

Awarua Wetland is an important site for migratory birds such as the Bar-tailed Godwit (*Limosa lapponica*)
©Department of Conservation, NZ

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Due to its size and complexity the wetlands support a diverse range of native species, many of which are endemic to New Zealand. Notable fauna include the New Zealand Dotterel (*Charadrius obscurus* ssp. *obscurus*), Australasian Bittern (*Botaurus stellaris poiciloptilus*), Black-fronted Tern (*Sterna albobriata*) and native fish species, including Giant Kokopu (*Galaxias argenteus*), Banded Kokopu (*Galaxias fasciatus*) and Long-finned Eel (*Anguilla dieffenbachia*).

The ecological character of the wetlands is influenced by both natural and anthropogenic factors. Main threats to the 10,000 ha of peatlands are from an increase in fire and drainage. The freshwater swamps are threatened by drainage and invasion of pest species. But it is the threats to Waituna Lagoon from increased nutrient and sediment input that is of most concern to local community.

Waituna Lagoon is a coastal lagoon that naturally opened and closed to the sea. It fluctuated between estuarine (open to sea) and brackish periods (closed). For the last 50 years the opening and closing has been managed by local community. However, recent intensification of agriculture in the catchment and subsequent increase in nutrient runoff is a threat to water quality.

Notably, Awarua Wetland is one of three sites in New Zealand being restored by the Department of Conservation under the Arawai Kākāriki (Green Wetlands) Programme. This Programme involves the implementation of best practice methods for wetland mapping, fauna and flora survey, pest animal and plant control, and water regime and water quality management.



Peatland (bog) and tarns at Awarua Wetland. Waituna Lagoon and Foveaux Strait (ocean) are in the background
©Department of Conservation, NZ



A number of freshwater creeks flow into Waituna Lagoon. Increased nutrient and sediment loads are a threat to water quality
©Department of Conservation, NZ

Sustainable Land Use and Water Quality

Engagement with local farmers about sustainable land management has been a focus of the Department of Conservation. In particular, advocacy about the wise use of the drains and creeks that flow into Awarua Wetland.

Funding has been provided through the Arawai Kākāriki Programme to install fencing along waterways and establish riparian vegetation. This aims to decrease sediment and nutrient loads entering downstream wetlands such as Waituna Lagoon. Without improvements to water quality there is a risk that the macrophyte-dominated lagoon will switch to becoming dominated by algae, and lead to a decline of aquatic fauna.

Future research will assess the ecological requirements of the macrophytes beds in the lagoon, and in particular the relationship between opening and closing events, water quality, macrophytes and algae (phytoplankton).

Education and Interpretation

Community participation is well established at the Awarua Wetland. Local community, industry and government representatives provide advice to the Department of Conservation's restoration programme through the Awarua Wetland Advisory Group. The Waituna Landcare Group has also been active in the region for a number of years, undertaking planting days and other awareness programs.

Part of the funding from the Arawai Kākāriki Programme has been allocated to improving public access and recreation opportunities. The Department of Conservation is currently developing a boardwalk and walking/mountain bike trail, which are outlined in a Draft Recreation Plan. Interpretation signs along the boardwalk aim to educate local community and visitors on the values and threats to the Ramsar site.

Field days have also been organised to inform community about the restoration project. At a field day in 2008 helicopter flights over the 19,500 ha wetland were made available to community at a reduced cost. During the flights, locals who had lived in the region for years were surprised at the size and diversity of the Awarua Wetland complex.

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Future Plans

Future conservation activities for the Awarua Wetlands will focus on three inter-related themes: 1) Protecting ecological and cultural values by managing key threats to the wetland; 2) Development of best practice methods for monitoring and management that also guide other restoration projects in New Zealand; and 3) Engagement with local community to promote sustainable land management.

Management

The Ramsar site is predominantly managed by the Department of Conservation - the central government organisation charged with conserving the natural and historic heritage of New Zealand. However, wetland management such as monitoring estuarine water quality is also undertaken by the regional council (Environment Southland) and two local councils. Private landholders have responsibility for managing activities on land adjacent to the wetlands as prescribed under the *Resource Management Act 1991* and other legislation.

Department of Conservation staff actively involved in the monitoring and management of the wetland include: rangers (2 full-time) and community relations and technical staff including ecologists (approx. 10 part-time staff providing advice and undertaking surveys).

Approximately \$560,000 (NZD) of government funding was allocated to Awarua Wetland during the 2008/2009 financial year from the Arawai Kākāriki Programme.



Large areas of Awarua Wetland burnt by fire ©Department of Conservation, NZ



Wetland viewing shelter and boardwalk at Awarua Wetland ©Department of Conservation, NZ

